Remarks

This Amendment is responsive to the Non-Final Office Action of **August 6, 2009**. Reexamination and reconsideration of **claims 1-12, 14-19, 21, and 23-38** is respectfully requested.

Status of Claims

Claims pending for examination:	1-12, 14-19, 21 and 23-38
Claims canceled herein:	21, 23-24
Claims added herein:	none
Claims currently amended:	14, 38
Claims in independent form:	1, 14, 25, 28, 35, and 38

Summary of The Office Action

Claims 14-19 were rejected under 35 USC §112, second paragraph, as purportedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 1-5, 8-12, 25-27, 29-34, and 38 were rejected under 35 USC §102(b) as purportedly being anticipated by Christenson et al (US 6,324,620)(Christenson.

Claims 6-7 were rejected under 35 USC §103(a) as purportedly being unpatentable over Christenson and in view of Cousins (US 6,671,772)(Cousins).

Claims 14-19, 28 and 35-37 were rejected under 35 USC §103(a) as purportedly being unpatentable over Christenson and in view of Johnson (US 2002/0138670)(Johnson).

Claims 21 and 23-24 were rejected under 35 USC §103(a) as purportedly being unpatentable over Christenson in view of Johnson and further in view of Cousins.

Present Amendment

The specification has been amended to ensure that the claims are not misinterpreted to be software per se under §101. The term computer-readable medium is intended to be statutory subject matter and hence has been amended to recite it as a storage medium. Thus no new matter has been added. A computer-readable medium encoded with a computer program is statutory (MPEP 2106.01, section I, 2nd paragraph).

I. Claims 14-19 were rejected under 35 USC §112, second paragraph, as purportedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Independent Claim 14 has been amended to address the points made by the examiner. The §112 rejection should now be overcome.

II. Claims 1-5, 8-12, 25-27, 29-34, and 38 were rejected under 35 USC §102(b) as purportedly being anticipated by Christenson et al.

Independent Claim 1

Applicant appreciates the Examiner's elaborated explanation in the Response to Argument section (OA, page 15). The OA states:

> Access to HOT data of Christenson is, in view of high priority jobs, is given over the accesses to COLD data. Thus, a high priority job of Christenson is given unmetered access to HOT data and the high priority job requests to access COLD data of Christenson are metered. Accordingly, Christenson teach that which is instantly claimed. (OA, page 15).

Applicant assumes that this discussion relates to Christenson (col. 12, lines 23-32), which discusses processing jobs. However, claim 1 recites "an access controller configured to control access requests ... by allowing unmetered access to data within a second predefined region within the storage device." The controller of Christenson is not configured to allow unmetered access to one region and fails to teach or suggest the claim elements. Christenson states:

> Requests for HOT data from high priority jobs are handled first. Next, requests for COLD for a high priority job is handled. Not until all the data for the high priority job has been accessed will a request for HOT data for a low priority job be handled. Finally, the request for COLD data from a low priority job is handled. In that way, the priority of the job will dictate the data access and the designation of the requested data as HOT or COLD will also affect the prioritization of data access.
>
> (col. 12, lines 23-32)

Hence, Christenson discusses the following order:

1. Process high priority jobs that access HOT data.
2. Next, process high priority jobs for COLD data.
3. When all high priority jobs are processed, then return to the HOT data and process a low priority job for HOT data.
4. Lastly, low priority jobs that access COLD data are processed.

The disclosed process fails to teach or suggest "unmetered access to data within a second predefined region" as claimed. HOT data in Christenson is not given unmetered access because access to HOT data from a low priority job is delayed in favor of access to COLD data from a high priority job. COLD data is also not given unmetered access. Christenson flip-flops between accessing HOT data and COLD data based on job priority. Therefore, no predefined region in Christenson is given unmetered access as claimed.

Accordingly, when considered in its entirety Christenson fails to teach each and every element of claim 1 and fails to establish a prima facie anticipation rejection. The rejection should be withdrawn and claim 1 allowed.

Claim 1 is now fully addressed as follows.

Claim 1 recites:

> an access controller configured to control access requests to a storage device by metering access to data within a first predefined region within the storage device and by allowing unmetered access to data within a second predefined region within the storage device

The Office Action cites col. 6, lines 45-67 as teaching Hot and Cold regions and metering access to a first predefined region and allowing unmetered access to data in a second predefined region (Office Action, page 3, 3rd paragraph). However, col. 6, lines 45-67 does not discuss metering access, does not discuss allowing unmetered access, and does not discuss processing access requests at all. Instead, col. 6, lines 45-67 discuss how the disk drive (DASD) is partitioned and how data on the disk drive (DASD) is moved to hot or cold regions based on how often the data is utilized. For example, Christenson states:

> For the partitioning, the HOT and COLD data are identified and are placed appropriately in the HOT and COLD partitions of the DASD units in the system. New data added to the DASD units is also similarly identified and partitioned. The HOT and COLD data are moved appropriately between DASD units based upon the utilization of those units...
>
> (Christenson, col. 6, lines 53-61)

Therefore, col. 6, lines 45-67 fails to teach or suggest the claimed elements.

The Office Action also cites col. 12, lines 23-25 as allegedly teaching "handling the requests for HOT data before the handling of requests for COLD data" (Office Action, page 3, last 5 lines). The interpretation was in view of the present specification [0025] relating to giving priority to hot access requests. However, MPEP 2141.02 requires that a reference must be considered in its entirety and not simply based on one sentence such as col. 12, lines 23-25:

> A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).
>
> (MPEP 2141.02, section VI, 1st sentence)

When sentences following lines 23-25 are considered, Christenson clearly does not teach or suggest the claimed elements:

> Requests for HOT data from high priority jobs are handled first. Next, requests for COLD for a high priority job is handled. Not until all the data for the high priority job has been accessed will a request for HOT data for a low priority job be handled. Finally, the request for COLD data from a low priority job is handled. In that way, the priority of the job will dictate the data access and the designation of the requested data as HOT or COLD will also affect the prioritization of data access.
>
> (col. 12, lines 23-32) [emphasis added]

This section was discussed above. The cited section clearly states that high priority jobs that request COLD data are processed before low priority jobs that request HOT data. This means that requests for data in the HOT region are delayed until requests for data in the COLD region are completed from high priority jobs. Therefore, this section teaches alternating between HOT and COLD region by processing requests based on job priority and not based on the region where the data resides.

In the cited example, assume that the COLD region corresponds to the first predefined region in claim 1 and the HOT region corresponds to the second predefined region. The cited example teaches that the HOT region is not given priority over the COLD region since low priority jobs that request HOT data are delayed and performed after high priority jobs that request COLD data. Thus if giving priority is regarded as metering, the cited section fails to teach or suggest "allowing unmetered access to data within a second predefined region" as recited in the claim. Either way Christenson is interpreted, neither the HOT region nor the COLD region receives "unmetered access to data" as recited in claim 1. Thus the claimed access controller is not taught.

Accordingly, Christenson fails to teach or suggest each and every element of claim 1 and fails to establish a prima facie rejection. The rejection should be withdrawn and the claim allowed.

Independent Claim 25

Claim 25 recites similar features as claim 1. As explained above, Christenson fails to teach or suggest allowing unmetered access to data within a second predefined region. Therefore, Christenson fails to teach or suggest "controlling the access requests ... by metering access to data within a first predefined region ... and by allowing unmetered access to data within a second predefined region ..."

Christenson fails to establish a prima facie anticipation rejection. The rejection should be withdrawn and the claim allowed.

III. Claims 6-7 were rejected under 35 USC §103(a) as purportedly being unpatentable over Christenson and in view of Cousins

Claims 6 and 7 depend from independent claim 1. Thus they patentably distinguish over the references for the same reasons.

IV. Claims 14-19, 28 and 35-37 were rejected under 35 USC §103(a) as purportedly being unpatentable over Christenson and in view of Johnson

Independent Claim 14

Claim 14 recites:

> where the metering includes limiting a number of access requests to the second region based in part on a threshold number of the access requests to the second region.

The OA cites Johnson [0020] and [0025] as allegedly teaching these elements (OA, page 10, lines 1-5). Applicant respectfully submits that the cited text fails to teach or suggest the claimed elements. Instead, the cited paragraphs discuss allowing the low priority I/O requests to process in order to prevent starvation of the low priority requests. Thus the claim is not taught or suggested. Furthermore, the starvation control is based on the number of low priority requests, and is not based on access requests to a particular region. The rejection should be withdrawn and claim 14 allowed.

V. Claims 21 and 23-24 were rejected under 35 USC §103(a) as purportedly being unpatentable over Christenson in view of Johnson and further in view of Cousins.

Claims 21 and 23-24 are now cancelled. Thus the rejection is moot.

Examiner Interview

If issues still remain after considering the present response, the undersigned attorney respectfully requests an examiner interview. The examiner may call whenever convenient.

Conclusion

For the reasons set forth above, **claims 1-12, 14-19, and 25-38** patentably and unobviously distinguish over the references and are allowable. An early allowance of all claims is earnestly solicited.

Respectfully submitted,

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